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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/663,839 | 09/17/2003 | Sung Uk Moon | 242923US90 | 2705 |
| 22850 | 7590 | 12/17/2007 | | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER WENDELL, ANDREW | |
| | | | ART UNIT 2618 | PAPER NUMBER |
| | | | NOTIFICATION DATE 12/17/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/663,839 | | MOON ET AL. | |
| | Examiner | | Art Unit | |
| | Andrew Wendell | | 2618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/19/2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 recites the limitation "response signal holder" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harel et al. (US Pat# 6,128,472) in view of Beckmann et al. (US Pat Appl# 2003/0022683).

Regarding claim 1, Harel teaches a radio communication system having base stations (Fig. 3) and mobile stations 106 (Fig. 1), to perform multicast communication (Col. 2 line 62-Col. 3 line 9), wherein the mobile station comprises a response signal transmitter configured to transmit a response signal including a group ID identifying a multicast group to the base station (Col. 4 lines 15-25), the response signal responding to a control signal for the multicast group which the mobile station is joining in (Col. 4 lines 15-25); and the base station comprises a response signal transmitter configured to transmit to the controller, one response signal selected from a plurality of response signals transmitted from mobile stations, the plurality of response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 2 line 62-Col. 3 line 9 and Col. 4 line 36-Col. 5 line 12, even though the one signal does not go to a radio network controller, the same principle applies since one message out of a plurality messages is transmitted to a controller). Harel fails to teach a radio network controller and mobile stations.

Beckmann et al. transmitting multicast messages in a radio system, and correspondingly designed radio system, transmitter and receiver teaches a radio communication system having a radio network controller RNC (Fig. 1), base stations BS (Fig. 1) and mobile stations UE 1-5 (Fig. 1), to perform multicast communication (Sections 0005-0006).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a radio network controller and mobile stations as taught by Beckmann et al. into Harel's multicast

system in order to transmit multicast messages reliably and securely with little expenditure (Section 0004).

Regarding claim 3, Harel teaches a base station (Fig. 3) supporting multicast communication (Col. 2 line 62-Col. 3 line 9), the base station comprising a response signal transmitter configured to transmit, to a controller, one response signal responding to a control signal for a multicast group and selected from a plurality of response signals transmitted from mobile stations (Col. 2 line 62-Col. 3 line 9 and Col. 4 line 36-Col. 5 line 12, even though the one signal does not go to a radio network controller, the same principle applies since one message out of a plurality messages is transmitted to a controller), the plurality of response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 4 lines 15-25). Harel fails to teach a radio network controller and mobile stations.

Beckmann et al. teaches a base station BS (Fig. 1) and mobile stations UE 1-5 (Fig. 1), supporting multicast communication (Section 0064).

Regarding claim 5, Harel teaches a detector 108 and 110 (Fig. 3) configured to detect a first reception of the one response signal transmitted from the mobile stations 106 (Fig. 1); and wherein the response signal holder holds the at least one response signal for a predetermined duration after the first reception of the one response signal (Col. 2 line 62-Col. 3 line 9 and Col. 4 line 36-Col. 5 line 12). Harel fails to teach a mobile station.

Beckmann et al. teaches mobile stations UE 1-5 (Fig. 1).

6. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harel et al. (US Pat# 6,128,472) in view of Beckmann et al. (US Pat Appl# 2003/0022683) and further in view of Kall et al. (US Pat# 7,149,195).

Regarding claim 7, Harel in view of Beckmann teaches the limitations in claim 3. Harel and Beckmann fail to teach a response signal counter.

Kall teaches a response signal counter configured to count the number of response signals to a control signal for a group, the response signals being transmitted from mobile stations (Col. 4 lines 8-19); a judger configured to judge whether the counted number of the plurality of response signals is more than a predetermined number or not (Col. 4 lines 8-19); and wherein the response signal transmitter configured to transmit at least one response signal to the controller, when the counted number of the plurality of response signals is more than the predetermined number (Col. 4 lines 8-19).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a response signal counter as taught by Kall into a radio network controller and mobile stations as taught by Beckmann et al. into Harel's multicast system in order to improve and efficient utilizations of radio resources (Col. 3 lines 25-27).

Regarding claim 8, Kall further teaches wherein the response signal transmitter notifies that the counted number of the plurality of response signals is more than the predetermined number, or the counted number of the plurality of response signals to the controller (Col. 4 lines 8-19).

7. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harel et al. (US Pat# 6,128,472) in view of Kall et al. (US Pat# 7,149,195).

Regarding claim 9, Harel teaches a receiver 112 (Fig. 3) configured to receive a response signal transmitted from at least one base station, the response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 4 line 15-Col. 5 line 12); a extractor 112 (Fig. 3) configured to extract the information from the received response signal. Harel fails to teach response signals being more than a predetermined number and a radio network controller.

Kall teaches a receiver configured to receive response signals transmitted from base stations, the response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 5 line 65-Col. 6 line 19), and information showing that the number of received response signals is more than a predetermined number (Col. 4 lines 8-19); a extractor configured to extract the information from the received response signal (Col. 4 lines 8-19); and a radio controller 36 (Fig. 1) configured to perform radio controlling in communication in accordance with the extracted information.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate response signals being more than a predetermined number and a radio network controller as taught by Kall into Harel's multicast system in order to improve and efficient utilizations of radio resources (Col. 3 lines 25-27).

Regarding claim 10, Harel teaches a receiver 112 (Fig. 3) configured to receive a response signal transmitted format at least one base station, the response signal including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 4 line 15-Col. 5 line 12); a extractor 112 (Fig. 3) configured to extract the information from the received response signal. Harel fails to teach response signals being more than a predetermined number and a radio network controller. Harel fails to teach a response signal including the number of response signals transmitted from mobile stations and a radio controller.

Kall teaches a receiver configured to receive a response signal transmitted format at least one base station, the response signal including the number of response signals transmitted from mobile stations (Col. 4 lines 8-19) and including a same group ID identifying a same multicast group to which the mobile stations are requesting to join (Col. 5 line 65-Col. 6 line 19); a extractor 112 (Fig. 3) configured to extract the information from the received response signal (Col. 4 lines 8-19); and a radio controller 36 (Fig. 1) configured to perform radio controlling in multicast communication in accordance with the extracted number of response signals.

Response to Arguments

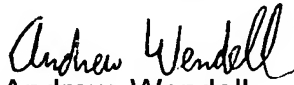
8. Applicant's arguments with respect to claims 1, 3, 5, and 7-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Wendell whose telephone number is 571-272-0557. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Andrew Wendell
Examiner
Art Unit 2618

11/27/2007


NAY MAUNG
SUPERVISORY PATENT EXAMINER